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DURING THE

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32d Congress, 1st Session. [SENATE.] Miscellaneous, No. 83.

MEMORIAL

OF

M. F. MAURY, U. S. N.,

PRAYING

The establishment of a line of mail steamships from Norfolk or Charleston to Pará, at the mouth of the Amazon, to connect with a line running thence to Rio de Janeiro.

May 10, 1852.
Referred to the Committee on the Post Office and Post Roads.

May 12, 1852.
Ordered to be printed.

The memorial of M. F. Maury, a lieutenant in the navy of the United States, to the Senate and House of Representatives in Congress assembled, respectfully showeth:

That he has for a number of years been engaged with investigations concerning the winds and currents of the sea, particularly as it regards their bearings upon commerce and navigation.

In the course of these investigations many facts and considerations have been suggested which have a practical bearing upon some of the great interests of state, and your memorialist hopes, therefore, that he may be pardoned for spreading before your honorable bodies some of the results and conclusions to which he has been led.

On account of the currents which flow through, and the winds which blow over the Gulf of Mexico, the Gulf of Mexico is, for many of the practical purposes of commerce and navigation, a closed sea. Hence commercial men and navigators have maintained that the real outlet of the Mississippi river to the ocean, is not at the Balize, but in the straits of Florida.

Similar agents have placed the mouth of the Amazon, not where that river empties into the ocean, which is under the equator, but they have removed it far into the northern hemisphere, and placed it near the commercial gateway of our own Mississippi.

If drift-wood from the Andes, in the interior of South America, be set afloat upon the head-waters of the Amazon, and it another log be felled from the Rocky mountains, in the interior of North America, and cast upon the head-waters of the Missouri, these two pieces of drift—taken to represent the currents of their rivers, and of the seas into which they empty—

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will, each obeying the force of the winds and set of the currents, be drifted out upon the broad ocean through the Florida pass.

The prevailing winds at the mouth of the Amazon are the SE. trade winds; and no vessel coming out of the mouth of that river can stand to the southward on account of the land, nor to the eastward on account of the winds and currents, both of which are directly in the teeth of all sailing vessels that attempt to steer such courses.

Passing a few leagues to the north, the outward-bound Amazonian then enters the region of the NE. trade winds, which compel her, unless she be bound into the Caribbean sea, to stretch off to the northward and westward until she has passed through the region of the NE. trades, and gains the parallel of 25° or 30° north, by which time she finds herself off our own coast.

Now this is the course of all vessels under canvass from the Amazon, whether they be bound to Rio de Janeiro, in Brazil, to India, or to Africa, or any of the markets of the Pacific around Cape Horn, or to the commercial marts of Europe.

Be their destination where it may, unless it be along the Spanish main or through the Caribbean sea, they must first steer north to cross the belt of northeast trades, and in doing so they must pass by our doors.

Therefore, for the peaceful and practical purposes of commerce and navigation, there is but one highway from the mouth of the Amazon. On that highway the southern Atlantic ports of the United States occupy the position of half-way houses on the great market-way, that is some day to lead from the valley of the Amazon to the rest of the world. That market way we overlook, the winds and the waves have placed the keys of it in our hands. Let us not by, *non user*, suffer them to fall into the hands of others.

If we regard the whole continent of America at one view, we observe that, in the equatorial regions, it is nearly cut in twain to receive an arm of the sea skirted on the east by the chain of islands; the Great and Little Antilles, which extend from the peninsula of Florida on the north to the mouth of the Orinoco on the south; that this land-locked arm of the sea is separated from the Pacific on the west, by a narrow neck of continent called the "Isthmus." On the north, this same arm of the sea receives the drainage from the valley of the Rio Grande, the Mississippi and the Alabama rivers; on the south, the surplus water of the Amazon, the Orinoco, the Magdalena and Atrato are emptied into it also.

This sheet of salt water may therefore be treated of as an expansion of the Mississippi on the north and of the Amazon on the south.

Regarding this magnificent marine basin as a commercial receptacle, we may search the world in vain for another such feature in physical geography wherewith to compare it. It is unique; and for its commercial capabilities it must forever remain unsurpassed and unequalled.

It has a semi-continent on the north and another on the south. When it is seed time on one side of this continental receptacle of agricultural and commercial wealth, it is harvest time on the other. Being between the two hemispheres, with their opposite seasons, it will have a round of crops always in market. Six months after the first delivery of the new crop takes place from the north, a fresh crop from the south will be in the act of coming forward.

The Mississippi river gives drainage and a commercial outlet to the

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largest and the most fertile valley in the northern hemisphere. The river basin of the Amazon (for the Orinoco is connected with it by a natural canal, and therefore belongs to the system,) is the largest and the most fertile in the world.

The Mississippi, taking its rise near the parallel of 50° of north latitude, runs south. At every step it changes its latitude; with its latitude, its climates are changed; with its climates, the productions on its banks are also changed. Consequently the trader as he descends the Mississippi beholds at every turn some new article of produce, some fresh variety of merchandise offering for commerce; and by the time he crosses the tropic of Cancer and bounds out through the commercial mouth of this river upon the blue waters of the Atlantic ocean, he will have crossed the climate and the region for every agricultural staple, and ranged through all the capacities of field and forest in the northern hemisphere, from barley, furs and peltries, down to the list of tropical productions.

The Amazon, on the other hand, runs east, and its navigable tributaries, flowing both from the north and the south, push the inter-tropical varieties of field and forest far down towards the circle of Capricorn in the other hemisphere.

The Mississippi has but reached the sugar-producing latitudes where it expands out upon the Gulf of Mexico. The Amazon takes up the list where the Mississippi leaves it, and, commencing with sugar, it yields in great profusion and of fine quality, coffee, cochineal, cocoa and cotton, tobacco, hemp and indigo, India-rubber, wax, gums, drugs and resins. With cabinet woods and dye-stuffs of great beauty and of infinite variety, this splendid river-basin completes the commercial round by the addition to the above list of many other articles from the field, the forest, and the mine, of rare value or great worth.

In the commercial circle, these two river-basins are the supplements of each other; what one lacks, that the other has to spare.

The foundations of commerce rest upon diversity of climate; for without diversity of climate there can be no diversity of productions, and consequently no variety of produce which begets barter, and thus gives rise to commerce.

The continent of Europe, extending from the polar basin, reaches no farther to the south than the parallel of 36° north; consequently none of the climates due any of the parallels between 36° north and the equator, are to be found in Europe: and if not the climates, certainly not the productions.

Now it is a fact in physical geography that is worthy of remark in this connexion: where the continent of Europe ends, at that degree of latitude begin the river-basins of India, which, extending from the parallel of 36° north far down into the inter-tropical regions of this hemisphere, have enriched, with their produce and their commerce, every nation of Europe that has ever ventured abroad with her merchantmen in search of it. And why? Simply because the latitudes and the climates, and consequently the productions of India, were not to be found in Europe; and the European wanting them, sent to India for them. In like manner the people of India wanted the productions of Europe. Hence barter, and the foundation of all commerce, may be referred to difference of latitude and climate.

But to exchange the produce and the merchandise of the north frigid and north temperate for that of the north torrid zone, the European had to

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encounter a tedious and dangerous navigation; and he had withal to compass such a distance, that the time taken for his vessel to go and come once, occupied the full year.

On the other hand, we have here at our very doors this great valley of the Amazon, with all, and more than all, the climates and soils, and agricultural capabilities of India twice told. The distance, under modern improvements of navigation, from our southern ports to the mouth of the Amazon, is not as many days as India used to be in months from Europe.

The valley of the Mississippi extends, according to the computation of physical geographers, over an area of 982,000 square miles. That of the Amazon and its confluents, with the Orinoco as one of them, embraces that vast area more than twice over. The great Amazonian valley is said, by the same authority, to cover an area of upwards of two millions of square miles in extent.

The Mississippi river is computed to afford a literal navigation of 15,000 miles in length; some put it down as high as 20,000. But the Amazon and its majestic tributaries wind through an inland navigation of such an extent, that if stretched out in one line, its length would be enough to encircle the earth three times: it is set down as high as 80,000 miles. The Amazon is said to be navigable for vessels of the largest class up the foot of the Andes; the Pennsylvania 74 may ascend that high. And so traversed with navigable streams and water-courses is this great Atlantic slope of South America, that there are in it no less than 1,500 miles of "Furos" or natural canals, through which it is practicable for vessels to cross from one river over into another.

Were this valley settled up and subdued to cultivation, "the Indies," in a commercial sense, would thereby be lifted up and placed at our doors; for all the productions of the east flourish there; and so jealous and afraid of such a result was Portugal, in her day of East India possessions and commerce, that by a royal ordinance it became unlawful to cultivate, in the great Amazon basin, a single drug, spice, or plant of East India growth or production.

The republics of Ecuador, Peru, and Bolivia have large and rich provinces upon the head navigable waters of the Amazon, so that the free navigation of that river, or an exchange with Brazil and the other powers concerned, of the free navigation of the Mississippi for that of the Amazon and its tributaries, would at once and without more ado give rise to a considerable commerce. As to its prospective value and importance, it is useless to speculate.

The navigation of the Amazon would divert from the Pacific coasts of those republics a valuable portion of that trade which now goes around Cape Horn and reaches this Amazonian water shed, by transportation on the backs of sheep and asses across the summits of the Andes.

A remarkable feature in the profile of the South American coast line is its want of articulation. The shore-line of that part of the world is almost as stiff and rigid as are the three sides of a right-angled triangle, which it resembles. It is without any considerable indentations; and nowhere, among the southern continents, do we find those jutting promontories and peninsulas, or those encircling arms and gulfs of the sea which in the northern hemisphere so increase the length of shore-line, and give that articulation to the continental profiles which enable ships, as in the Mediterranean, the Red sea, the gulf of Mexico, about the peninsulas of India,

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and the northern seas of Europe, to sail up into the interior and penetrate with commerce the very heart of countries that, but for such indentations of shore-line, would be thousands of miles from the sea and its commerce.

At best, trading vessels by sea can but fringe with commerce the outskirts of South America; for its shore-line, as already remarked, is without indentation. As yet, the heart of that country has never been touched, and unless its magnificent rivers and majestic sheets of fresh water be opened to navigation, the commercial enterprise of the world never can reach the great interior of South America. Naturally, the whole of that continent, except the narrow strip between the summit of the Andes and the Pacific ocean, slopes down to the Atlantic. It is tributary to the Atlantic, and into the Atlantic it is destined to pour its commerce. The country drained by the Amazon and the La Plata, embraces an area larger than the continent of Europe.

The navigation of these streams would divert a large portion of the Cape Horn trade, and throw it at our feet; for we perceive from the statements already made that, on account of the winds and currents of the sea, the mouth of the Amazon is in close physical connexion with our southern ports; and to make that connexion one of business, profit, and friendship, we have but to devise a plan which, by encouraging commerce and navigation there, shall, with the concurrence of the other powers concerned, give an impulse also to the settlement of that valley, and secure to our merchants the right to trade up and down that river on fair and liberal terms.

Bearing in mind, therefore, all these things, and taking into consideration the geographical position of that river-basin, and our situation with regard to its outlet; considering its climates, its soils, its resources, and its capabilities; that the foundations of its prosperity are to rest on a liberal commercial policy, and that its industrial pursuits must receive a tone, character, and direction from those who conduct that commerce; considering that it is the policy of the United States to cultivate the relations of peace with all nations through the bonds of mutual interests and good will; considering also that this river-basin is for the most part a wilderness, and that it is, therefore, like wax, to receive impressions from commerce; considering too, that the laws of Brazil touching immigration into that valley, are said to be of the most liberal character; considering, moreover, the toleration of those laws and the classes of people who are already there; considering, let it be repeated, all these things, your memorialist is deeply impressed with the importance of the subject. He beholds in it a question of immense magnitude. The question of navigation and commerce with the Amazon and up the Amazon, the greatest river and the most fertile river-basin in the world, is the greatest commercial question of the world. The bearings and the influences of such a question upon the future well-being and prosperity of this country cannot, for their scope and extent, be taken in, unless by the most expanded view of the most far-seeing statesmanship.

Your memorialist therefore prays for such constitutional and rightful legislation, on the part of your honorable bodies, as shall tend to encourage commerce and navigation with that magnificent water-shed. Among the collateral results, incident to a judicious course of legislation now upon such a subject, may be counted, sooner or later, a tide of immigration there, followed by settlement and tillage, which, in turn, will lead to the development of the boundless commercial resources of that unparalleled region, and to the establishment of those business ties, social relations, and happy con-

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nexions which active commerce and frequent intercourse never fail to beget between nations.

Imagine an immigrant, a poor laboring man he may be, to arrive from the interior of Europe as a settler in the valley of the Amazon. Where he was, his labor could but support himself in the most frugal manner, and he was then no customer of ours. But in his new home, where, with a teeming soil and fine climate responding to his husbandry, and where the labor of one day in seven is said to be enough to crown his board with plenty, he works with his wonted diligence, and out of his abundance he has wherewithal of his own produce—coffee it may be, or drugs, or spices, or gums, or cocoa, or rice, or tobacco, or some other of the great staples of that valley—but be what it may, he has enough to give largely in exchange with us for all the manufactured articles, whether of fancy, necessity, or luxury, that he craves the most. In the long list of what the immigrant there will require of us, may be included that great assortment of goods known as "Yankee notions;" also, pickled beef and pork, hams and flour, butter, lard, and the like; for the climate of the Amazon is not favorable to the production and stowage of any of those things. It is particularly unfavorable to the curing of meats and the grinding of flour; it is also unfavorable for all in-door occupations. And in the settling up of the valley of the Amazon, considering that New York and Boston are but eighteen or twenty days, under canvass, from the mouth of that river; considering that the winds are fair for going and free for coming, and that the Atlantic ports of the United States are the only market places for which the winds are thus propitious; considering all the physical advantages which we thus enjoy, and regarding this immigrant as the type of a class, it may be expected, whenever the tide of immigration, guided and sustained by American enterprise and energy, shall begin to set into the valley, that New York and Boston, with the manufacturing States, will have to supply those people with every article of the loom or the shop, from the axe and the hoe up to gala dresses and river steamers.

The man, therefore, who in his native Europe could not buy a cent's worth of American produce, simply by being transferred as a settler in the valley of the Amazon, becomes at once a producer, and one of the best customers to American merchants that it is possible for a commercial nation to have.

And Europe is ready, as soon as American commerce backed by American energy, shall give the world tangible evidence of the riches and resources of that country, to pour forth its hordes into it.

Not only so would its settlement enrich us; but in other respects also, it would add to our national greatness and prosperity; for it may be set down as an axiom in political economy, as true as is the catholic proposition of geometry, that in order that communities of men may forsake the land, take the sea, use it and become seamen, it must be easier to earn a living at sea than on the land belonging to such communities.

Hence we find the severe climates and barren soils of the north sending their young men in crowds down to the sea for a living; but never will men and never have men been known to forsake cheap lands, rich soils and fine climates, for the sea-life.

The valley of the Kennebec and the Merrimac, and the shores of Cape Cod, may send forth of their yeomanry to make sailors of; but we have never yet heard of young men in any considerable numbers forsaking their

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homes in the teeming valley of the Mississippi, for the dangers, the hardships, and the scanty fare of a common sailor.

And neither will the immigrant or his son forsake the mild climate and kind soil of the Amazon for the sea. American merchants, American ships and American sailors will, therefore, be the chief competitors for the fetching and the carrying of all that trade to which, in the process of time, two or three hundred millions of people in the valley of the Amazon and which it is capable of sustaining, will give rise.

The commercial future of that valley is the most magnificent in the world. It belongs mostly to Brazil; and our trade with Brazil is already greater than it is with any other country whatever—excepting only England and France.

From the United States to Rio the voyage is long and uncertain; and our merchants are falling into the habit of conducting their Brazilian correspondence through England. There is a monthly line of steamers thence to Rio; its time of going is twenty-nine or thirty days. The average sailing passage from New York to Rio is from forty to fifty days; hence, it is more convenient for the business-man to send his letters via England.

Now there is a line of steamers from Pará, at the mouth of the Amazon, to Rio. A line from Norfolk to Pará, equalling in speed the Collins line to Liverpool, would make the passage in eight or ten days. At the same rate, the distance thence to Rio might be accomplished in another week or ten days, thus bringing that great commercial mart of South America within twenty instead of forty days, of our business-men.

All the lines of ocean mail steamers that have yet been directly encouraged by the United States government in the waters of the Atlantic, have their terminii in New York. No direct encouragement to steamship enterprises has been given by the government to any port south of New York. Your memorialist is opposed to centralization, and therefore for this, as well as for other reasons, prays that Norfolk or Charleston, or some other southern Atlantic port, may be made the terminus of a line of United States mail steamships to Pará, touching at Porto Rico and such other West India islands as may be agreed upon.

Another reason why the preference in this enterprise should be given to a southern port, is in the distance; for the southern ports are nearer than those of the north to the mouth of the Amazon. And to ask that these steamers should pass by southern ports, with South American correspondence to be landed at the north and sent back through the mails to the south, would seem both unfair and unreasonable in your memorialist.

Moreover, he has ventured to specify only one of a series of measures which it may be necessary to adopt, in order to develop, for the benefit of American navigation, the great commercial wealth of the Amazon. He contents himself with specifying this one, because, in his judgment, it is highly expedient and of pressing importance.

And, as in duty bound, your memorialist will ever pray, &c.

M. F. MAURY,
Lieutenant United States Navy.

National Observatory, *May* 3, 1852.

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